

REMARKS

Claims 1 to 7 and 10 to 20 were rejected under 35 U.S.C. 103 as being unpatentable over Wirz in view of Helms '754. Claims 8 and 9 were rejected under 35 U.S.C. 103 as being unpatentable over Wirz in view of Helms and further in view of McCartney.

Claims 21 and 22 have been added.

Wirz describes a sheet-supporting transfer drum (see Fig. 9, reference numeral 16) with a perforated glass bead blanket and which is connected to a suction device so that air is blown out of or sucked into the transfer drum through the perforations and a sheet to be transferred properly contacts the cylinder guiding surface (see column 7, lines 21-31 and 59-68), as described in the Background section of the present application.

Wirz is not a chill roll for a web printing press, as asserted in the Office Action, but rather is clearly directed solely to a sheet-fed printing press (see Col 9, line 51, abstract and Wirz throughout). Wirz does not chill the sheets.

Claims 1 and 18 recite a chill roll and "a web passing over the chill roll."

Wirz does not show a web at all, and as Wirz is a sheet-fed press and the transfer cylinder is required to grip a sheet, it could not be modified for use with a web. The transfer drum of the sheet fed press is only partially cylindrical; it has portions removed (Figs 6, 8, 9 and 10) to provide space for grippers used to hold the sheet and clamps to hold blankets (conventional or glass bead type). Clamps are used to hold the perforated glass bead blanket down to the partial cylinder, and thus the device does not cover the entire circumference of a cylinder and is not suitable for web contact.

In addition, there is no motivation or teaching to alter the transfer cylinder of Wirz with the teachings of Helms. Helms is a coldnip roll not suitable for use as a transfer cylinder in a sheet-fed press. There is no reason or motivation to provide chilling to Wirz, as the cylinder in Wirz is for transferring sheets, and they air is provided for sheet transfer not for cooling.

Withdrawal of the rejection to claims 1 and 18 and their dependent claims is respectfully requested.

Withdrawal of the rejections to the following dependent claims is respectfully requests for the following reasons as well:

With further respect to claim 3, the Wirz glass bead blanket is not integral with a surface of the drum. As stated in the present specification, in some embodiments of the

present invention porous layer 20 may be a layer, for example in the form of a sleeve, added over the outer surface of an otherwise conventional chill roll. In other embodiments of the present invention porous layer 20 may be formed integrally with surface 14 of cylindrical drum 12 during manufacture of the chill roll. Wirz does not show such an integral layer.

With respect to claims 8 and 9, it is respectfully submitted that there would have been no motivation or reason to replace the glass beads with a fibrous or foam material, as Wirz specifically desires a hard material.

With further respect to claim 12, claim 12 recites that the porous layer includes at least one of steel, aluminum and copper.

Wirz at column 3, lines 5-16 describes the use of textured chrome plated foil. No mention is made of steel, aluminum, or copper.

With respect to claim 13, claim 13 recites that the porous layer has a thickness of from about 1 mm to about 2.5 mm

Wirz at column 6, lines 34-39 refers to the diameter of the perforations in the Wirz blanket, not the thickness of the layer.

With respect to claim 15, claim 15 recites that the air is entrained at the first location.

Wirz makes no mention of air entrainment, boundary layer, or any other term describing air trapped between cylinder and web. There is also no web mentioned in the Wirz patent.

With respect to claims 16 and 19, these claims recite that the pathway is configured to enable the air to move from the first location so as to improve a heat transfer between the web and chill roll.

Wirz makes no mention of improvement of heat transfer between the web and chill roll, or even of heat transfer for the sheets of Wirz.

New Claims

Claim 21 is a new independent claim and recites that the web is inked and heated before contact with the chill roll, as per the specification at [0002]. Wirz does not show this feature, as it is a sheet-fed press.

Claim 22 is a new dependent claim dependent on claim 2 and recites wherein the porous layer defines the entire circumferential surface of the drum. Wirz does not show this feature as it needs a gap in the outer surface for sheet transfer.

CONCLUSION

The present application is believed to be in condition for allowance and applicants respectfully request such action.

If any additional fees are deemed to be due at this time, the Assistant Commissioner is authorized to charge payment of the same to Deposit Account No. 50-0552.

Respectfully submitted,

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